

IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-22. (Cancelled).

23. (Previously Presented) A telecommunication fiber optic cable for gas pipeline application and having a built-in leakage detecting device comprising:

an optical core comprising a number of telecommunication optical fibers;

an outer jacket covering the optical core; and

one or more gas leakage detector optical fibers, said one or more gas leakage detector optical fibers being enclosed within the outer jacket.

24. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein said cable has a neutral axis and a preferential bending plane and the leakage detector optical fibers are located at, or close to, a plane that is substantially orthogonal to the preferential bending plane and passes through the neutral axis.

25. (Previously Presented) The telecommunication fiber optic cable according to claim 24, further comprising a linearly extending rod reinforcing system comprising strength rods that force the cable to bend in the preferential bending plane.

26. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the leakage detector optical fibers are helically wound by a unidirectional winding.

27. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the leakage detector optical fibers are helically wound by an SZ winding.

28. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein said one or more gas leakage detector optical fibers comprise a tight protection structure composed by two concentric layers made of a silicone-based rubber and a polyamide compound, respectively.

29. (Previously Presented) The telecommunication fiber optic cable according to claim 28, wherein said one or more gas leakage detector optical fibers comprise a primer for providing adherence with the jacket.

30. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the one or more gas leakage detector optical fibers are contained in one or more tubes.

31. (Previously Presented) The telecommunication fiber optic cable according to claim 30, wherein the tubes comprise a primer for providing adherence with the jacket.

32. (Previously Presented) The telecommunication fiber optic cable according to claim 30, wherein the tubes contain jelly.

33. (Previously Presented) The telecommunication fiber optic cable according to claim 25, wherein the strength rods comprise a primer for providing adherence with the jacket.

34. (Previously Presented) The telecommunication fiber optic cable according to claim 23, further comprising a metal barrier for gas-tightly closing the optical core.

35. (Previously Presented) The telecommunication fiber optic cable according to claim 34, wherein the metal barrier is selected from thermally sealed aluminium poly laminated; corrugated extruded aluminium tube; non corrugated extruded aluminium tube; corrugated thermally sealed steel poly laminated; non corrugated thermally sealed steel poly laminated; corrugated longitudinal welded steel tube; and non corrugated longitudinal welded steel tube.

36. (Previously Presented) The telecommunication fiber optic cable according to claim 34, wherein the metal barrier comprises a primer for providing adherence with the jacket.

37. (Previously Presented) The telecommunication fiber optic cable according to any one of claims 29, 31, 33 or 36, wherein the primer comprises a material selected from ethylene acrylic acid and their esters, ethylene methacrylic acid and their esters, ethylene maleic anhydride and their esters, or a mixture thereof.

38. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the optical core comprises a plurality of tubular elements arranged around a central strength member and loosely housing the telecommunication optical fibers.

39. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the optical core comprises a cylindrical member provided with grooves, each groove housing a number of telecommunication optical fibers.

40. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the optical core comprises a central tube housing the telecommunication optical fibers, the central tube comprising polybutylene terephthalate or high density polyethylene.

41. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the optical core comprises a metal central tube housing the telecommunication optical fibers.

42. (Previously Presented) The telecommunication fiber optic cable according to claim 41, further comprising a non-metallic central tube inserted within the metal central tube.

43. (Previously Presented) The telecommunication fiber optic cable according to claim 42, wherein the non-metallic central tube is plastic.

44. (Previously Presented) The telecommunication fiber optic cable according to claim 23, wherein the outer jacket has a thickness of at least about 2.0 mm.

45. (Previously Presented) The telecommunication fiber optic cable according to claim 44, wherein the outer jacket has a thickness of about 2.6 mm.

46. (Previously Presented) The telecommunication fiber optic cable according to claim 25, wherein the reinforcing rods have a diameter of at least about 1.00 to 1.60 mm.

47. (Previously Presented) The telecommunication fiber optic cable according to claim 46, wherein the reinforcing rods have a diameter of about 1.50 to 1.60 mm.

48. (New) A telecommunication fiber optic cable for gas pipeline application and having a built-in leakage detecting device comprising:

an optical core comprising a number of telecommunication optical fibers;

an outer jacket covering the optical core; and

one or more gas leakage detector optical fibers, said one or more gas leakage detector optical fibers being enclosed within the outer jacket and separated from the optical core.